

SUPPORT FOR THE AMENDMENT

Support for Claim 17 is found in Claims 1 and 2 as originally presented as well as on page 8, lines 12-15 of the specification. Support for the claims 18-31 is found in claims 2-16 as previously presented. No new matter would be added to this application by entry of this amendment.

Upon entry of this amendment, Claims 17-31 will now be active in this application.

REQUEST FOR RECONSIDERATION

The present invention is directed to a process of preparing fine zeolite particles, fine zeolite particles and a detergent composition comprising same.

Applicants wish to thank Examiner Boyer for the helpful and courteous discussion held with their U.S. representative on January 20, 2004. At that time, Applicants' U.S. representative argued that use of an alkaline earth metal oxide/aluminum oxide ratio as claimed in a process for preparing fine zeolite particle was nowhere disclosed or suggested in the cited prior art. The following is intended to expand upon the discussion with the Examiner.

Zeolites, in view of their ion-exchange properties, have been used in detergent compositions. Fine particle size and rapid ion exchange speed are desirable properties therein. Conventional methods for the preparations of zeolites of a fine particle size have been not entirely satisfactory. Accordingly, methods of synthesizing fine zeolite particles are sought.

The present invention addresses this problem by providing a process for preparing a fine zeolite particle, in the presence of an alkaline earth metal compound, at a $\text{MeO}/\text{Al}_2\text{O}_3$ molar ratio of from 0.005-0.1. Applicants have discovered that such a process in which the $\text{MeO}/\text{Al}_2\text{O}_3$ molar ratio is as claimed, provides for a simple process for the preparation of fine

zeolite particles. The present invention also provides for a process for preparing fine zeolite particles in which the aluminum source and/or silica source are fed into a circulating line connection to a reaction tank. Applicants have discovered that by such a method, fine zeolite particles may be officially obtained even where the concentration of solids is very high. Such processes are nowhere disclosed or suggestion in the cited prior art of record.

The rejection of Claims 1-16 under 35 U.S.C. § 103(a) over Verduijn U.S. 5,017,353 is respectfully traversed.

Claims 1, 2, 7 and 9-11:

This embodiment of the present invention is directed to a process for preparing fine zeolite particles in the presence of an alkaline earth metal-containing compound.

A method for preparing fine zeolite particles in which a $\text{MeO}/\text{Al}_2\text{O}_3$ ratio is from 0.005 to 0.1 is nowhere disclosed or suggested in the cited prior art of record.

Verduijn describes a method for preparing zeolite L (col. 1, lines 8-10). The referenced describes the formation of zeolite L by adjusting the alkalinity in order to suppress the formation of zeolite W (col. 3, lines 5-14). The reference describes the preparation of zeolite L within specified molar ratios of i) cationic oxide/silicon dioxide; ii) water/cationic oxide; and iii) silicon dioxide/aluminum oxide (col. 4, lines 22-35). The reference broadly describes the cation as including potassium, an alkali metal, as well as a mixture of alkali metal or alkaline earth metals including such examples as sodium, calcium, barium, rubidium (col. 4, lines 36-40). The reference provides for a process in which reaction of a silica source and aluminum source could have been conducted in the presence of an alkaline earth metal as a possible cation, however, there is no suggestion to react silica and aluminum sources at an alkaline earth metal oxide/aluminum oxide molar ratio as claimed.

In contrast, the present invention is directed to a method in which silica and aluminum sources are reacted in the presence of an alkaline earth metal, at an alkaline earth metal

oxide/aluminum oxide molar ratio of 0.005-0.1. As there is no motivation in the cited reference to have selected an alkaline earth metal from among potassium and alkali metals, there is no suggestion of the alkaline earth metal oxide/aluminum oxide ratio as claimed. For this reason, the claimed invention is clearly not obvious from the cited reference and accordingly withdrawal of the rejection under 35 U.S.C. § 103(a) is respectfully requested.

Claims 3-6, 8 and 13-16:

This embodiment of the present invention is directed to a process in which an aluminum source and/or a silica source are fed into a circulating line connected to a reaction tank. Applicants have discovered that in such a configuration, fine zeolite particles may be efficiently obtained even at solid concentrations of 25% by weight or more.

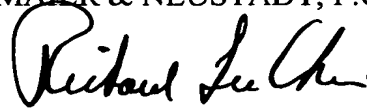
The process described by Verduijn is described as above. There is no disclosure whatsoever in the cited reference of the use a circulating line connected to reaction tank and accordingly the cited reference fails to disclose or suggest the claimed element of a circulating line connected to a reaction tank. In the absence of this claim limitation, the cited prior art clearly fails to disclose or suggest the claimed invention. Accordingly, withdrawal of the rejection under 35 U.S.C. § 103(a) is respectfully requested.

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Applicants submit this application is now in condition for allowance and early
notification of such action is earnestly solicited.

Respectfully submitted,

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